

NEWSLETTER OF THE ITE NORTH CENTRAL SECTION

UNIVERSITY AND FOURTH ROADWAY
IMPROVEMENT PROJECT

Scott Poska, PE, PTOE, RSP1, IMSAII | Alliant Engineering

In each issue, the INCITER features an article coordinated by one of NCITE's technical committees. This article is a contribution from the Intersection Traffic Control Committee.

INSIDE THIS
 EDITION

President's Message 3

Upcoming Events 4

Section Meetings 5

YMC Update 7

Student Chapter Update 8

Accelerating Innovation Through Partnership 13

Impacts on Design Standards Related to Speed 15

Right Sizing a Legacy Highway: The TH 73 Corridor Study 17

Technical Committee Update 19

Advertisers 20

Member Updates 23



The University Avenue SE and 4th Street SE Roadway Improvements Project represents a data-driven application of modern traffic engineering to deliver Complete Streets outcomes on one of Minnesota's most complex urban corridors. Serving as the primary gateways to the University of Minnesota campus, these parallel one-way streets must accommodate intense daily volumes of transit, bicycles, pedestrians, freight, and general traffic within a constrained right-of-way, while also managing extraordinary surges in demand during major campus and regional events.

Alliant led a rigorous multimodal analysis and design process that balanced operational performance with safety and accessibility. Through a tiered approach combining Synchro screening and detailed multimodal VISSIM microsimulation, the project team evaluated lane configurations, signal operations, and multimodal interactions under both typical peak conditions and event-driven scenarios. The resulting design rebalanced the corridor within existing right-of-way, modernized traffic signal systems, optimized person-throughput, and integrated separated bikeways, protected intersections, ADA upgrades, and BRT- ready transit facilities. Together, these improvements transformed the corridor into a safer, more efficient, and more intuitive transportation system that better serves all users.

(continued on page 11)

EXECUTIVE COMMITTEE

President	Joe Devore , KLJ Engineering josephdevore@kljeng.com
Vice President	Justin Sebens , SRF Consulting Group jsebens@srfconsulting.com
Secretary	Sarah Peterson , HDR sarah.peterson@hdrinc.com
Treasurer	Jack Olsson , Kimley Horn Jack.Olsson@kimley-horn.com
Directors	Olivia Polinsky-Rose , HDR Olivia.Polinsky@hdrinc.com Justin Cyr , Alliant Engineering jcyr@alliant-inc.com
Past President	Nik Costello , Washington County Nik.costello@washingtoncountymn.gov

TECHNICAL COMMITTEES

Capacity, Planning, and Analysis	Sajid Raza , Michael Baker sajid.raza@mbakerintl.com Erik Kappelman , SRF Consulting Group EKappelman@srfconsulting.com Brett Gunderson , Houston Engineering brettgunderson95@gmail.com
Complete Streets	AJ Fisher , Dakota County aj.fisher@co.dakota.mn.us Uthej Vattipalli , SRF Consulting uvattipalli@srfconsulting.com
Emerging Technologies	Jake Eisinger , Washington County jake.eisinger@washingtoncountymn.gov Nathan Wade , Flow Labs Nathan@flowlabs.ai
Intersection Traffic Control	Michael Odell , City of Minneapolis michael.odell@minneapolismn.gov Naveen Mallipaddi , WSP naveen.mallipaddi@wsbeng.com
Traffic Operation and Maintenance Discussion Group	Greg Boche , Washington County greg.boche@washingtoncountymn.gov

STANDING COMMITTEES

Young Member Committee	Blake Andert , SEH bandert@sehinc.com Hannah DeBruin , HDR Engineering hannah.debruin@hdrinc.com
Professional Development	Joe Devore , KLJ Engineering joseph.devore@kljeng.com
Social Media	Adam Capets , Stantec Adam.Capets@stantec.com
Student Activities and Career Guidance	Ann Stewart , MnDOT ann.stewart@state.mn.us Chad Jorgenson , SEH cjorgenson@sehinc.com Eden Haag , Ramsey County eden.haag@co.ramsey.mn.us
Advertising	Bryce Statz , Kimley-Horn Bryce.Statz@kimley-horn.com
Website	Jack Olsson , Kimley Horn Jack.Olsson@kimley-horn.com
Newsletter	Cortney Falero , SRF Consulting Group cfalero@srfconsulting.com
Membership	Michael Gille , Kimley Horn Michael.Gille@kimley-horn.com

STUDENT CHAPTERS

University of Minnesota—TC	Mikai Tasch , President tasch033@umn.edu
South Dakota State University	Brenden Brichacek , President Brenden.Brichacek@jacks.sdstate.edu
North Dakota State University	Talha Ahmed , President talha.ahmed@ndsu.edu
University of Minnesota—Duluth	Amaia Graber , President umd.dtso@gmail.com

GREAT LAKES ITE

Great Lakes ITE District Director	Danielle Deneau , Oakland County ddeneau@rocc.org
Great Lakes ITE District NCITE Officer	Tyler Krage , Dakota County tyler.krage@co.dakota.mn.us

PRESIDENT'S MESSAGE

Hello NCITE Members!

Spring cleaning is in full swing as the weather is heating up, and it's been a busy stretch of the year for the NCITE Board, Technical Committees, and our members! NCITE has hosted monthly section meetings, a joint NCITE & WTS ethics training, several committee meetings and the joint NCITE & ITSO Earth Day Cleanup. We also got to sponsor and host an NCITE Road Show lunch as part of the ITS Northern Lights conference in Sioux Falls, SD. I want to thank our membership for signing up and showing up for these great transportation topics throughout the spring helping to support the sharing of transportational knowledge.

You'll also be seeing NCITE's updated new logo and branding rolling out in all of our media products as part of our section refresh going on this spring. **Jack Olsson** will be overseeing a website update while **Cortney Falero** will be doing a brand refresh as part of the inciter newsletter. I'd also like to thank **Gina Heim**, **Abdulla Alishaqi**, and **Sebastian Coll** for stepping up into new positions as leading our social media and newsletter. A huge thank you to **Cortney Falero** and **Tyler Krage** for their multi-year communications committee commitments.



Joe DeVore, 2026 NCITE President

The NCITE executive board has been working hard planning other upcoming events for our members, including the following events this summer:

- **Summer Social (July 23 at CHS Field)** – NCITE will once again be teaming up with MSES, WTS, SAME, ITSMN, and NSPE-MN to host a joint summer social event at a St. Paul Saints game at CHS Field in St. Paul. This event is always a blast and typically averages over 200 attendees. Look for a registration email in early June.
- **3rd Annual NCITE Golf Event (Early August at Cedarholm Golf Course)** – This event is continuing on as a great opportunity for those learning to golf (or those needing to be humbled in their golf game). It will be an afternoon event at Cedarholm Golf Course in Roseville, MN, and will feature a 9-hole scramble, fun contests, happy hour, dinner, and raffle prizes. Keep your eyes out for the save the date and start finding your foursome teammates now!



2026 also offers our ITE Great Lakes District the opportunity of hosting the international annual meeting in Detroit this summer. This includes several big items that our NCITE section can participate in:

- **July 17-18 - ITE Student Leadership Summit (SLS)** – NCITE is sending TWO student groups representing the University of Minnesota and a Greater Minnesota team to the SLS, Traffic Bowl, and ITE Annual Meeting this year. These teams have big shoes to fill as the last NCITE traffic bowl team to compete was the 2021 University of Minnesota team that won 2nd Place in the Grand Championship Traffic Bowl.
- **July 19 – ITE Technical and Professional Workshops and Opening Reception** – ITE is providing 13 workshop options over 8 hours for attendees to gain additional technical skills in a small group setting.
- **July 20-22 – The ITE International Annual Meeting** is providing 20 hours of Technical / Poster Sessions, Council Meetings, and Technical Tours across the three days highlighting the best of presentations internationally.



Make sure to get your registration and travel booked before the early bird deadline of May 29th as hotel block space is limited: <https://www.iteannualmeeting.org/>

I look forward to seeing you all this summer at our upcoming events!

Joe DeVore, 2026 NCITE President

UPCOMING EVENTS

ITE CALENDAR FOR DISTRICT, SECTION, & CHAPTER MEETINGS

Stay Connected with ITE Events



NCITE CALENDAR

Stay Connected with NCITE Events



JOINT ITE INTERNATIONAL AND GREAT LAKES DISTRICT ANNUAL MEETING AND EXHIBITION

Detroit, MI | July 19-22, 2026



Detroit 26

Annual Meeting and Exhibition

July 19-22, 2026

ATTEND AN UPCOMING NCITE TECHNICAL COMMITTEE MEETING!

Check out upcoming topics here.

For more information on the committees and how you can get involved:

https://nc-ite.org/Committee_Listing

For professional development opportunities:

http://nc-ite.org/content.php?page=Professional_Development_Meetings

SECTION MEETING UPDATE

The January Section Meeting was held on January 30, 2026 at **Jax Café** in Minneapolis, MN. **Jason Staebell** of Hennepin County, **Alicia Valenti** of Metro Transit, and **JoNette Kuhnau** of Kimley-Horn presented on the 2025 NCITE Transportation Achievement Award winning project, the **Metro B Line Arterial BRT and Lake Street Improvements project**.

The METRO B Line arterial bus rapid transit (BRT) project connects neighborhoods from Uptown Minneapolis to downtown St. Paul and spans 13 miles on Lake Street, Marshall Avenue, and Selby Avenue. Metro Transit, Hennepin County, and the City of Minneapolis all identified significant safety and mobility needs on Lake Street: transit riders represented 21 percent of Lake Street users, Lake Street was one of the slowest transit corridors in the region with buses averaging 8 miles per hour in peak periods, three Lake Street intersections had the highest concentrations of pedestrian crashes in Hennepin County, and the entirety of Lake Street was identified as a High Injury Street in the Minneapolis Vision Zero Action Plan. With the tremendous needs on Lake Street and an arterial BRT project in development, Hennepin County recognized the opportunity to create a new vision for Lake Street that would achieve the County's transportation and equity goals. You can watch the January Section Meeting Presentation [here!](#)



The February Section Meeting was held on February 20, 2026 at **MnDOT Water's Edge** in Roseville, MN. **Gwen Mei** of MnDOT and **Justin Sebens** of SRF Consulting presented on **MnDOT's Rural Roundabout Study**.

The presentation from MnDOT Geometric Design Support Unit summarized the study conducted in partnership with MnDOT and academic partners to evaluate driver behavior at recently constructed urban and rural roundabouts using AI-based video analysis. The study analyzed speeds (R1-R3), vehicle paths, lane discipline, yielding, and gap acceptance at four Minnesota intersections, two urban and two rural, finding that rural roundabouts generally experience higher entry and circulating speeds but remain within anticipated ranges. Results show that urban roundabouts are largely functioning as intended, while rural roundabouts without clear lane delineation experience significantly more off-tracking, shoulder use, and rutting, even among passenger vehicles. In contrast, rural sites with countermeasures such as rumble strips and color-contrasted pavement saw substantially better lane adherence. District feedback indicated that rural designs were driven primarily by context and maintenance considerations rather than cost alone, and key takeaways emphasize that simple design elements can meaningfully improve driver behavior and long-term performance at rural roundabouts. You can watch the February Section Meeting Presentation [here!](#)



SECTION MEETING UPDATE

The March Section Meeting was held on March 31, 2026 at **Utepils Brewing** in Minneapolis, MN. **Scott Poska** of Alliant Engineering presented on **University Avenue and 4th Street Roadway Improvements** project in Minneapolis.

This project transformed one of the state’s most active multimodal corridors into a safer, more efficient, and sustainable street system, and opened in the fall of 2025. During the design phase, several alternatives were explored and analyzed from a geometric design and operations perspective including on and off-street bicycle facilities, bicycle signal phasing, bicycle and pedestrian shared spaces and crossings, vehicle lane reductions, and pedestrian access and crossings. The project demonstrates how innovative design, detailed analysis, and collaborative engagement with stakeholders can resolve complex transportation challenges. You can watch the March Section Meeting Presentation [here!](#)



The April Section Meeting was held on April 15, 2026 at **MetroNOME** in St. Paul, MN. **Ethan Peterson** of MnDOT and **Josh Palmateer** of SEH presented on **Aesthetic Surface Treatments (AST)**.

Interest in ASTs (decorative, non-reflective pavement surface treatments) is growing, and MnDOT is receiving more requests for their use on trunk highway facilities. The presentation summarized current research and introduced the MnDOT AST Technical Memorandum. They focused on how MnDOT is moving toward a consistent statewide approach for location selection and suitability, as well as how proposals move through permitting and implementation. They discussed long term maintenance best practices and how responsibilities can be clearly defined to support durable, repeatable outcomes. You can watch the April Section Meeting Presentation [here!](#)



YMC UPDATE

YMC had a successful joint Earth Day event with UMN ITSO in April cleaning up the East River Flats Park followed by a happy hour at Malcolm Yards.



Coming soon in June, we will be hosting our annual **Bike & Brew event, open to all NCITE members!** If you would like to participate, please fill out this form to help us decide on the date and location of the bike ride: <https://forms.gle/QQw6N88Ff13adjrX9>

Do you have a fun event idea or want to help plan a YMC outing?

Reach out to Blake (Blake.Andert@metrotransit.org) or Hannah (Hannah.DeBruin@hdrinc.com) to join the YMC planning committee! We meet a few times a year, usually at a brewery or restaurant, to coordinate on any upcoming events, and we would love to see you there!

If you or a co-worker is interested in joining the Young Member Committee please visit the YMC Page on the NCITE Website [here](#). If you are not receiving the YMC StarChapter emails, please reach out to Blake (Blake.Andert@metrotransit.org) or Hannah (Hannah.DeBruin@hdrinc.com) to get on the mailing list.

STUDENT CHAPTER UPDATE - ITSO UMN

ITSO finished the 2025-2026 school year with several fun and informative events. They started this semester off with a TranspoTour of MnDOT's Regional Transportation Management Center, where they learned about how **MnDOT** manages their freeway operations. In February ITSO had two TranspoTalks, one with **Olsson Engineering** and another with a panel of **Metro Transit Planners**. Olsson came in to speak on some of their rail and traffic projects, and the panel of Metro Transit Planners gave their unique perspectives for a comprehensive view of how the approach to transit planning has changed at the agency over the years.

Later in April, **Alliant Engineering** presented on their ongoing project to improve the intersection at Highway 36 & Lake Elmo Avenue with an interchange, with construction expected to begin next month.

Finally, ITSO wrapped up the semester with a special event with former CEGE alum **Charles Marohn**, founder and president of **Strong Towns**. Chuck presented on the Federal Highway Act of 1956, the lasting impacts of the legislation that followed, and what that means for the future of infrastructure and civil engineering as a whole in the U.S. Aside from the TranspoTalks and TranspoTours, ITSO hosted several social events as well including a Dirty Soda Social for folks to hang out at where we gave out new ITSO t-shirts and joined NCITE YMC for an Earth Day cleanup at the East River Flats Park by campus!



STUDENT CHAPTER UPDATE - NDSU

The Institute of Transportation Engineers North Dakota State University Student Chapter organized several informative and engaging events during the 2025–2026 academic year. One of the featured events was a guest lecture by **Amy Beise** from the **North Dakota Department of Transportation**. The presentation focused on NDDOT pavement standards and inspection procedures, covering material specifications, quality control and quality assurance practices, and field inspection protocols used in roadway construction projects. The event provided students with valuable insights into real-world transportation engineering practices and state-level infrastructure management.

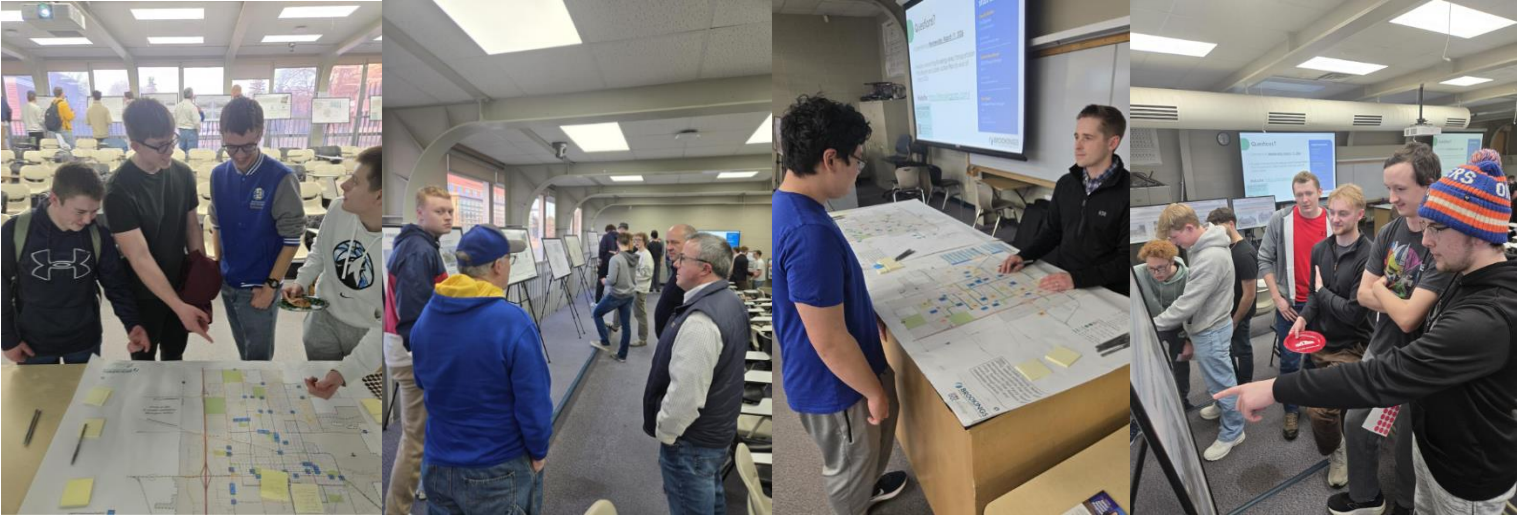


STUDENT CHAPTER UPDATE - SDSU

The SDSU Student Chapter hosted a Mock Public Meeting on March 4, 2025, led by **Tom Cook** of HDR Engineering. During the session, students were introduced to the Brookings Area Transportation Plan and gained valuable insights into current and future infrastructure initiatives impacting the community surrounding the university.

The meeting was structured to replicate an authentic public engagement experience, featuring display boards, key data points, and opportunities for attendees to provide feedback through comments. Approximately 40 students participated, making it a well-attended and engaging event.

This hands-on learning opportunity offered a unique perspective on the public planning process.



On September 24, 2025, the chapter organized a site visit to Sioux Falls, where members met with representatives from the **South Dakota Department of Transportation (SDDOT)**. The visit included a guided tour of an active transportation project featuring the redesign of an intersection and bridge. Four SDSU ITE members participated in the trip, gaining valuable firsthand insight into project planning and implementation.



**SOUTH DAKOTA
STATE UNIVERSITY**

University and Fourth Roadway Improvements Project (continued from page 1)

Complete Streets Implementation Through Engineering Design

The final design reflects Complete Streets principles implemented through traffic engineering and geometric design. Rather than layering multimodal elements onto an auto-oriented corridor, the project fundamentally rebalanced the street to prioritize safety, accessibility, and intuitive operation for all users.

These elements function as an integrated system. Bikeways are routed behind transit platforms to eliminate long-standing conflicts between buses and cyclists, while signal operations provide safe and efficient movements for all modes. The result is a corridor that clearly communicates priority through its design while maintaining reliable operations.

Collaboration, Perseverance, and Stakeholder Coordination

Delivering this project required sustained coordination among multiple agencies and stakeholder groups, much of which occurred during the COVID-19 pandemic. The project team engaged neighborhood organizations, business associations, bicycle and pedestrian advisory committees, university representatives, and transit partners to build consensus around lane reductions, access management, and curbside strategies.

Close collaboration among Hennepin County, the City of Minneapolis, the University of Minnesota, MnDOT, and Metro Transit was essential to align traffic operations, signal design, and future BRT implementation. This perseverance ensured the final design balanced local needs, regional mobility, and long-term system performance.



4th and University Reconstruction. Source Alliant Engineering

Conclusions

The University Avenue SE and 4th Street SE project serves as a replicable model for agencies nationwide facing similar challenges: large state university campus with constrained urban corridors, competing modal demands, and the need to integrate high-frequency transit without expanding right-of-way.

By maximizing the performance of existing infrastructure rather than pursuing costly expansion, the project demonstrates efficiency, economy, and innovation in transportation engineering practice.

This project advances the profession by demonstrating how design, multimodal performance evaluation, and stakeholder collaboration can reshape urban transportation corridors for lasting impact.



4th and University, Fall. Source Alliant Engineering

Project Information

Location:	Minneapolis, MN
Total Project Cost:	\$18.5 million
Completion Date:	September 2025
Lead Organization:	Alliant Engineering, Inc.
Partner Agencies:	Hennepin County, City of Minneapolis, University of MN, MnDOT, Metro Transit
Consulting Partners:	SRF Consulting Group, Alta Planning + Design, Braun Intertec



4th and University. Source Alliant Engineering

University and Fourth Roadway Improvements Project (continued from page 11)

Major Design Elements

- ▶ Two-way separated bikeway on University Avenue SE
- ▶ One-way separated bikeway on 4th Street SE
- ▶ Protected intersection treatments to reduce conflict points

- ▶ University Avenue and Fourth Street Lane reduction east of Church Street
- ▶ Corridor-wide ADA ramp upgrades and traffic signal reconstruction to latest design standards
- ▶ Conversion of curbside space to support continuous multimodal movement
- ▶ In-lane transit stops with raised platforms for future E Line BRT service



4th and University. Source Alliant Engineering



In each issue, the INCITER features articles coordinated by NCITE's advertisers.
This article is a contribution from **Bolton & Menk**

ACCELERATING INNOVATION THROUGH PARTNERSHIP: CARVER COUNTY'S HIGHWAY 5 IMPROVEMENTS

Bob Meurer, PE | Bolton & Menk

Delivering major transportation infrastructure typically takes time. Lots of it. Environmental documentation, design development, right-of-way acquisition, agency coordination, and funding alignment often unfold sequentially over many years. For Carver County's Highway 5 Improvements project, time was not a luxury the community had.

In 2019, Carver County launched a comprehensive study of the Arboretum area roadway system to address long-standing congestion, safety, and capacity challenges along one of the region's most critical corridors. What began as an areawide planning effort quickly evolved into an ambitious implementation program anchored by the Highway 5 Improvements project, now at the center of an approximately \$100 million infrastructure investment. Originally structured as multiple smaller projects, the program was consolidated into fewer, larger efforts through strategic and highly competitive funding awards. That shift fundamentally changed both the scale of the work and how it needed to be delivered.



The county's success in securing funding enabled smaller projects to be combined into one larger effort, reducing construction timelines. Strong partnerships and public engagement played a key role in the project's success. Source Bolton & Menk.

The Highway 5 Improvements project will expand Highway 5 from two lanes to four lanes, from Century Boulevard east of Highway 41 in Chanhassen to downtown Victoria. The project includes intersection improvements to support traffic flow and safety, as well as reconstruction of Highway 13, also known as Rolling Acres Road and Bavaria Road, between Interlaken and 78th Street. Additional elements include water quality best management practices to collect and treat highway runoff, along with safety and connectivity improvements for people who walk, bike, and roll. These include

Carver County Hwy 5 Improvements (continued from page 13)

improved access and a safer crossing connected to the Lake Minnetonka LRT Regional Trail. Together, these improvements advance safety, mobility, sustainable infrastructure, and long-term regional connectivity.

Partnering with Bolton & Menk, Carver County advanced the project under an accelerated schedule driven by a firm federal funding authorization deadline of June 2025. Missing that deadline would have triggered a costly reprogramming process, requiring Carver County to front expenses and potentially forgo millions of dollars in future reimbursements.

To protect funding and maintain momentum, the project could not follow traditional, sequential delivery methods. Instead, the project team adopted a milestone-based approach that challenged conventional infrastructure timelines. Tasks governed by statute or regulation were sequenced accordingly, while non legislated efforts were intentionally overlapped. This project held a fixed completion date, requiring an exceptionally high level of coordination, workflow adjustments, and targeted resource deployment to meet critical authorization milestones.

That same intensity of coordination carried through every phase of project delivery. Executing the work on an accelerated timeline required alignment, trust, and shared accountability among a wide range of partners. Carver County facilitated an exceptional level of collaboration, working closely with the Cities of Victoria and Chanhassen, the University of Minnesota Arboretum, MnDOT, FHWA, and numerous environmental and permitting agencies, supported by an extensive consultant and stakeholder team. At one point, more than 200 consultants were actively working on the project. While the pace was demanding, a shared understanding of constraints, goals, and public benefit allowed the team to make timely decisions and sustain progress.

In parallel with agency and partner coordination, public engagement played a key role in the project's success. Since the initial 2019 study, the team has hosted at least six public open houses, some drawing more than 350 attendees with average participation exceeding 275 people. Dozens of additional meetings and outreach efforts further supported community feedback and responsiveness to local concerns. Public outreach continues during construction through regular updates on project status, access, and staging, reinforcing transparency and trust.



Strong partnerships and public engagement played a key role in the project's success. Source Bolton & Menk.

The project met the June 2025 funding authorization milestone and is now under construction through mid-2028. When complete, the Highway 5 Improvements project will expand capacity, improve safety, and strengthen connections across western Carver County and the greater metropolitan area. The project demonstrates how bold local leadership, strong partnerships, and adaptive delivery strategies can deliver complex infrastructure that serves both present needs and long-term public benefit.

In each issue, the INCITER features articles coordinated by NCITE's advertisers.
 This article is a contribution from **Stonebrooke Engineering**

IMPACTS ON DESIGN STANDARDS RELATED TO SPEED

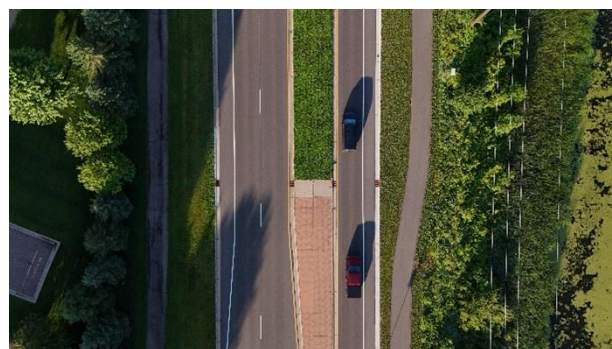
John Brunkhorst, PE | Stonebrooke Engineering

Cassie Martin | Stonebrooke Engineering

Stonebrooke was selected by MnDOT's Research Implementation Committee (RIC), and funded by the Minnesota Local Road Research Board (LRRB), to improve the collective understanding of how posted speed limits can and do influence roadway design, target key design elements that are controlled by design minimums based on speed versus other factors, and create a Technical Report representing the results of the research conducted.

This study underscores the critical role that roadway design plays in shaping driver behavior and managing operating speeds. While posted speed limits remain an essential tool, they are not as effective on their own in controlling vehicle speeds or enhancing safety. The research reviewed consistently shows that physical roadway elements, such as lane width, on-street parking, medians, and access density, have a more measurable impact on how fast people actually drive.

Tools such as Speed Reduction Factors and the Speed Limit Setting Tool offer data-driven methods to align design with safety goals, particularly for vulnerable users. To support agencies, findings were synthesized into an Excel spreadsheet for easy comparison, along with a YouTube video and flyer that share insights in an accessible, user-friendly format.



Dodd Blvd. Reconstruction, Lakeville, MN. Source: Stonebrooke Engineering

Our research involved identifying, reviewing, and compiling a list of design elements. This was done by searching the literature and pulling pertinent data from key studies. Stonebrooke provided a summary of similar findings, along with a synopsis, geometric features present (design elements), and pertinent findings for each study.

We began our review of sources by using MnDOT's Complete Streets Speed Impacts¹. One of the primary outputs of this research was the development of speed reduction factors (SRF) that quantify the magnitude of speed reduction due to various roadway geometric features. MnDOT and other local road agencies in the state can utilize these SRFs to forecast the anticipated impacts of design decisions on mean speeds. These factors will also help MnDOT design staff compare various design alternatives on candidate corridors expected to experience substantive volumes of vulnerable road users.

The ISU CTRE's study, The Interrelationships between Speed Limits, Geometry, and Driver Behavior², leveraged data from the Second Strategic Highway Research Program (SHRP2) Naturalistic Driving Study (NDS) to examine various aspects of driver behavior, including speed limit selection and engagement with in-vehicle distractions, as well as the impacts of these behaviors on crash risk while controlling for the effects of traffic, geometric, and environmental conditions. Time-series data from the SHRP2 NDS were leveraged to examine how drivers adapt their speeds: 1) under constant speed limits, 2) across speed limit transition areas, and 3) along horizontal curves.

¹ [MnDOT Complete Streets Speed Impacts](#) Savolainen, Peter, et al., 2024

² ISU CTRE The Interrelationships between Speed Limits, Geometry, and Driver Behavior Savolainen, Peter, et al., 2018

Impacts on Design Standards Related to Speed (continued from page 15)

Other studies from the National Cooperative Highway Research Program (NCHRP)³, Georgia Institute of Technology, and Lynda Bellalite at the University of Sherbrooke in Quebec⁴ comprised of tools such as the Speed Limit Setting Procedure (SLS-Procedure) automated with the Speed Limit Setting Tool (SLS-Tool), in-vehicle GPS technology, and a new model for setting credible speed limits exclusively in urban areas, with limits ranging from 25 to 43 mph in increments of 6 mph.

Stonebrooke’s Technical Report listed eight key findings that directly influence roadway design and driver behavior. On-street parking, medians (raised or depressed), two-way left-turn lanes, and the presence of curb and gutter all reduce speed. Studies also suggest that large influences on speed include the number of driveways and intersections, the number of lanes, width of lanes, and surrounding land use. Our Final Report and YouTube Video⁵ were prepared and presented to MnDOT RIC and LRRB in December 2025.



NCHRP 17-79 Speed Limit Setting Tool. Source: Stonebrooke Engineering



*Johnny Cake Ridge Road, Apple Valley, MN.
Source: Stonebrooke Engineering*

³NCHRP Web-Only Document 291 – Development of a Posted Speed Limit Setting Procedure and Tool Fitzpatrick, Kay, et al., 2021

⁴ A Model for Setting Credible Speed Limits in Urban Areas Institute of Transportation Engineers, ITE Journal ; Jan 2013; 83,1 pg. 40 Bellalite, Lynda

⁵ [Impacts on Design Standards Related to Speed](#) Brunkhorst, John, et al., 2025

In each issue, the INCITER features articles coordinated by NCITE's advertisers.
 This article is a contribution from **TKDA**

RIGHT SIZING A LEGACY HIGHWAY: THE TH 73 CORRIDOR STUDY

Caitlin Andress, PE, PTOE, RSP1 | TKDA

Many highways in Greater Minnesota reflect transportation needs from a previous era. In Chisholm, Trunk Highway (TH) 73 is one such corridor. A remnant of the former TH 169 alignment, this segment of TH 73 once carried substantially higher regional traffic volumes across the Iron Range. When TH 169 was rerouted south of Chisholm in the late 1960s, the four-lane divided roadway and frontage road system remained. The TH 73 Corridor Study examined how this legacy infrastructure could be adapted to better align with current conditions and community priorities.

The study focused on a 1.1-mile segment of TH 73 between TH 169 and 4th Avenue SW. While the corridor functions as an important connector for local and regional travel, analysis showed that current traffic demand is modest. TH 73 carries an AADT of about 4,800 vehicles, well below the capacity of a two-lane roadway, and all study intersections were found to operate at LOS A during peak periods. At the same time, the corridor's width, high travel speeds, and long crossing distances create a significant barrier for pedestrians and bicyclists.

Chisholm has become a destination for outdoor recreation, anchored by the Redhead Mountain Bike Park. Cyclists routinely travel between downtown Chisholm, the Iron Trail Campground, the Minnesota Discovery Center, and Redhead, often using TH 73 and crossing TH 169 due to limited bicycle facilities.

Study goals placed strong emphasis on active transportation facilities, while ensuring that local trips, regional travel, freight, and large mining vehicles continue to be properly accommodated. The mix of industrial, recreational, and local transportation requirements highlighted the need for an approach sensitive to the context.

The study began with detailed documentation of existing conditions, including traffic operations, multimodal facilities, and crash history. While the corridor didn't have a sustained crash history overall, the study found opportunities to enhance safety by addressing risk factors associated with roadway geometry and user exposure.

Public engagement was integrated throughout the process and proved especially meaningful in this rural context. For communities like Chisholm, MnDOT reconstruction projects are rare, so this was an important opportunity for community members to influence long-term transportation decisions. Three rounds of engagement showed strong interest from residents, business owners, and partner agencies. Common themes included a desire to reduce the overall size of TH 73, improve pedestrian and bicycle connections, and maintain reasonable traffic flow.

Using technical analysis and engagement feedback, the project team developed and evaluated five corridor alternatives. Elements included roadway lane reductions, access and frontage road modifications, intersection realignments, and roundabouts. All alternatives were evaluated using a consistent framework that considered safety, operations, multimodal connectivity, and community priorities. Traffic analysis showed that reducing travel lanes did not degrade corridor operations, even under future traffic scenarios.

The selected concept reduces the highway from four lanes to two, shortens pedestrian crossing distances, adds continuous multimodal facilities, and converts the TH 73 & W Lake Street intersection to a roundabout to address safety and speeding concerns as traffic enters downtown. This alternative best balanced safety improvements, operational performance, cost considerations, and long-term flexibility.



*Right-Sizing a Legacy Highway - The TH 73 Corridor Study.
 Source TKDA.*

TECHNICAL COMMITTEE UPDATE



Capacity, Planning, and Analysis Technical Committee

Co-Chairs: Sajid Raza, Erik Kappelman, Brett Gunderson

Recent Agenda Items:

Future Agenda Items: TBD

Next Meeting: TBD



Complete Streets and Safety Committee

Co-Chairs: AJ Fisher, Uthej Vattipalli

Recent Agenda Items: Active Transportation Discussion, MnDOT School Zone Speed Limit Guide

Future Agenda Items: TBD

Next Meeting: TBD



Emerging Technologies in Transportation Technical Committee

Co-Chairs: Jake Eisinger, Nathan Wade

Recent Agenda Items: Using ATSPM for Daily Traffic Signal Operations

Future Agenda Items: TBD

Next Meeting: TBD



Intersection Traffic Control Technical Committee

Co-Chairs: Michael Odell, Naveen Mallipaddi

Recent Agenda Items: ITCC 2026 Brainstorming Session, Complaint Resolution and Asset Management Discussion, Queue Warning System Discussion, Signal Timing Survey Discussion

Future Agenda Items: TBD

Next Meeting: May 19, 2026



Traffic Operations and Maintenance Discussion Group

Chair: Greg Boche

Recent Agenda Items: Signal Anchor Bolt Discussion, MnDOT RTMC Visit

Future Agenda Items: TBD

Next Meeting: TBD

ATTEND AN UPCOMING NCITE TECHNICAL COMMITTEE MEETING!

Check out upcoming topics here.

For more information on the committees and how you can get involved:

https://nc-ite.org/Committee_Listing



AECOM

800 LaSalle Avenue, Suite 1100
Minneapolis, Minnesota 55402
612 376 2000 tel
612 376 2271 fax


www.aecom.com




ALLIANT

Traffic Engineering · Transportation
ITS · MOT · Alternative Delivery
Transportation Planning

www.alliant-inc.com An employee-owned company.



We look at projects from a different perspective - **YOURS.**



BOLTON & MENK

Real People. Real Solutions.
www.Bolton-Menk.com



**FELSBURG
HOLT &
ULLEVIG**

connecting & enhancing communities



HDR

We Do Things Right to Make Great Things Possible

Applying the Safe System Approach to improve traffic operations, safety, and corridor performance



HRGreen®

Providing engineering and technical management solutions that **build communities** and **improve lives.**

- ▶ SIOUX FALLS, SD
- ▶ ST. PAUL, MN
- ▶ HRGREEN.COM

BROADBAND + CONSTRUCTION + ENVIRONMENTAL
GEOSPATIAL + LAND DEVELOPMENT + MUNICIPAL
PLANNING + TRANSPORTATION + WATER



Your **one-stop shop** for full service consulting.

Transportation · Transit · Traffic
Structural · Roadway · Environmental

Kimley»Horn



KLJ

ENGINEERING | REIMAGINED

[f](#) [in](#) [@](#) [v](#) [x](#) KLJENG.COM

**CONNECTING PEOPLE.
BUILDING COMMUNITY.**

*Proud Silver
Sponsor of NCITE*

**Michael Baker
INTERNATIONAL**
MBAKERINTL.COM



*I-494 Airport to Highway 169 First Construction
Design-Build | Hennepin County, Minnesota*



contact us at sehinc.com or 800.325.2055



where **innovation** meets **impact**.
explore what's possible.

engineers | architects | planners | scientists
better places. clean water. infrastructure renewal. mobility.






SRF

*We create lasting solutions to
strengthen communities.*

www.srfconsulting.com



**Rooted in the communities we
serve, we offer comprehensive
planning, design, engineering, and
construction management services**

STANTEC.COM





Responsible by Design

Improving
Safety.
Connecting
Communities.




**TC² Moving.
People.
Forward.**



transportationcollaborative.com



**SHAPING THE FUTURE
ONE PROJECT AT A TIME.**

Working with communities to build what's next in infrastructure. WSBENG.COM

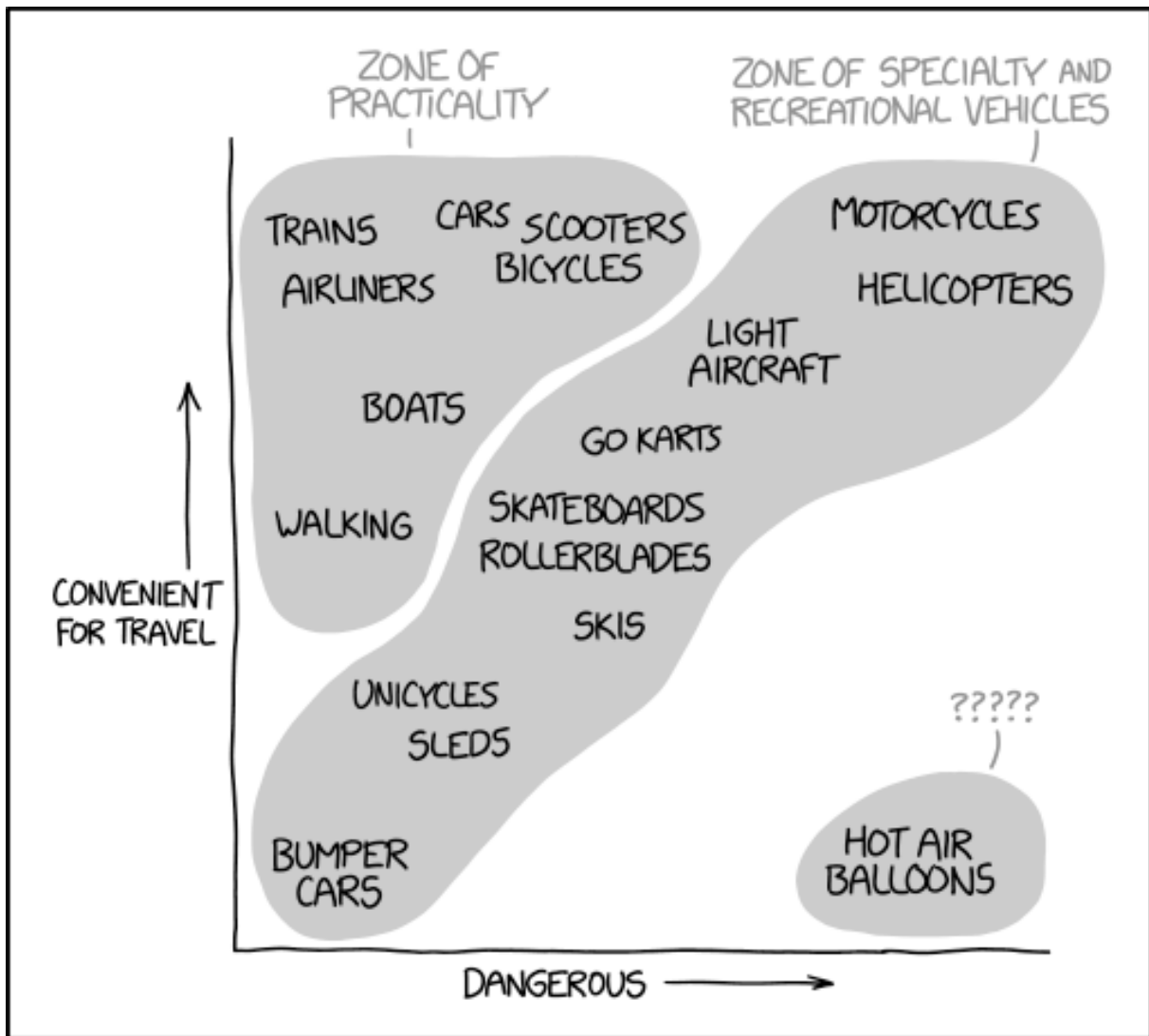
GREAT LAKES DISTRICT



ite

NORTH CENTRAL SECTION

ITE LOL



HOT AIR BALLOONS ARE THE OPTIMAL MODE OF TRANSPORTATION, IF YOUR OPTIMIZATION ALGORITHM HAS A SIGN ERROR.

Source: xkcd.com

MEMBERSHIP UPDATES

New Members:

Alex Armbrustmacher, SRF Consulting

Amy Barnstorff

Sophia Caldwell, Interstate Engineering

Kyle Domeier, Sambatek

Dalton Dryburgh, Apex Engineering Group

Ryan Kelzenberg, IronStride Solutions

Afia Ibnat Subah, City of Rochester

Bismark Nana Kwaku Bonsu, University of North Dakota

Amaia Graber, University of Minnesota Duluth

Eli Henriksen, University of St. Thomas

Isabella Hugley, University of Minnesota

Abdinasir Ibrahim, University of Minnesota

Hamza Muktar, University of Minnesota

Conrad Rodriguez, University of Minnesota

Nick Saia, University of Minnesota

Luke Smeby, University of Minnesota

Mikai Tasch, University of Minnesota

Member Moves:

Katie Schmidt, SSTS LLC, formerly HDR

Jon Wiegand, HR Green, formerly HDR

IN MEMORIAM

Douglas Henry Differt August 27, 1933 — March 21, 2026. **Douglas “Doug” Differt** was a respected transportation professional, mentor, and leader whose lifelong contributions left a lasting mark on the North Central Section of ITE (NCITE) and the broader transportation community. Doug’s career reflected both technical excellence and a deep curiosity about the world around him. With a natural aptitude for math and science—whether working with soil samples or slide rules—he approached engineering with precision and passion. Doug earned his degree in civil engineering from the University of North Dakota and later obtained a master’s degree from the Yale University School of Highway Traffic. His professional career spanned more than four decades with the Minnesota Department of Transportation (MnDOT), where he played a vital role in shaping the state’s transportation system. He went on to serve as Vice President and Director of Engineering Development at URS before founding his own consulting firm in 2012. Doug remained active in the field until his retirement at the age of 85. Throughout his career, Doug was known not only for his technical expertise but for his unwavering support of others. He guided, encouraged, and inspired colleagues, helping them grow more confident and capable in their work. During some of MnDOT’s most challenging periods—including the aftermath of the I-35W bridge collapse—Doug was a steady, trusted voice, offering wisdom, perspective, and reassurance to all who worked with him. Doug’s contributions were recognized in 2013 when he was named NCITE Transportation Professional of the Year—an honor that speaks to both his professional accomplishments and the profound impact he had on others. A dedicated supporter of education, Doug established a scholarship at Inver Hills Community College to encourage and assist future engineering students. His generosity and commitment to developing the next generation of professionals reflect the same values he carried throughout his life and career. Doug Differt will be remembered as a thoughtful engineer, a generous mentor, and a compassionate friend whose influence will endure for generations to come.

If you or a friend has changed jobs or moved, we would like to stay in touch. Members, please update your information by visiting https://nc-ite.org/Updating_your_Information. To access this area, you will need to know your membership number. Your “username” is your membership number, and your “password” is the first 6 letters of your last name (e.g. Johnson=Johnso). Non-members, please contact Michael Gille via phone (612.294.9733) or email (michael.gille@kimley-horn.com) for assistance. Please provide your name, title, employer, complete street address (including mailstop, if applicable), telephone number, fax number, and email address.

Cortney Falero
Newsletter Editor



SUBSCRIBE
TO OUR CHANNEL

Connect with us on

